

FIRE ALARM SYSTEM GENERAL NOTES

1. SCOPE OF WORK: WORK SHALL INCLUDE REMOVAL OF EXISTING CONVENTIONAL FIRE ALARM SYSTEM INCLUDING ALL CONTROL EQUIPMENT, POWER SUPPLIES, CABINETS, INT. CIRCUITS AND DEVICES, NOTIFICATION APPLIANCE CIRCUITS AND DEVICES. INSTALL NEW FIRE ALARM SYSTEM INCLUDING CONTROL PANEL WITH NEW SIGNALING LINE CIRCUITS, INITIATING DEVICE CIRCUITS AND NOTIFICATION APPLIANCE CIRCUITS. NEW FIRE ALARM SYSTEM SHALL BE IN ACCORDANCE WITH NFPA 72, THESE DRAWINGS AND SPECIFICATIONS.
2. APPLICABLE CODES/STANDARDS: INTERNATIONAL BUILDING CODE - 2003 EDITION INTERNATIONAL FIRE CODE - 2003 EDITION INTERNATIONAL MECHANICAL CODE - 2003 EDITION UTAH STATE FIRE MARSHAL RULE R710-4 NFPA 70 - 2002 EDITION NFPA 72 - 2002 EDITION NFPA 90A - 2002 EDITION
3. QUALITY ASSURANCE: ALL EQUIPMENT, MATERIAL AND DEVICES USED FOR THE FIRE ALARM SYSTEM INSTALLATION SHALL BE UL LISTED AND/OR FM APPROVED FOR USE IN FIRE PROTECTION SYSTEMS. ALL INITIATING DEVICES SHALL BE LISTED COMPATIBLE WITH THE FIRE ALARM CONTROL PANEL (FACP). MAJOR SYSTEM COMPONENTS (CONTROL PANELS, INITIATING DEVICES, ADDRESSABLE MODULES AND RELAYS, POWER SUPPLIES, ETC.) SHALL BE FROM A STATE OF UTAH DFCM APPROVED MANUFACTURER. APPROVED MANUFACTURERS INCLUDE FIRE-LITE AND SILENT KNIGHT.
4. SUBMITTALS: FIRE ALARM SYSTEM CONTRACTOR SHALL PREPARE AND SUBMIT SHOPS DRAWINGS TO STATE FIRE MARSHAL, OWNER AND ENGINEER FOR REVIEW/ APPROVAL PRIOR TO ORDERING OR INSTALLING ANY EQUIPMENT. SUBMITTALS SHALL CONFORM TO THE CONSTRUCTION DOCUMENTS REQUIREMENTS OF IFC 907.1.1.

5. DEMOLITION: IT IS THE INSTALLER'S RESPONSIBILITY FOR THE DEMOLITION OF THE EXISTING FIRE ALARM SYSTEM. ALL NEW DEVICES AND CIRCUITS WILL REPLACE THE OLD AND GENERALLY REUSE THE EXISTING LOCATIONS. ANY EXISTING DEVICES AND CONDUIT NOT BEING REPLACED AND REUSED THAT ARE VISIBLE, SUCH AS CABINETS NOTIFICATION APPLIANCES OR SMOKE DETECTORS SHALL BE REMOVED AND REMAINING WALL OR CEILING SURFACE REPAIRED OR REPLACED TO MATCH SURROUNDING AREAS. REMOVE ALL UNUSED WIRE IN ALL REMAINING J-BOXES AND/OR CONDUITS. ANY CEILING TILE DAMAGED BY THE INSTALLER MUST BE REPLACED WITH THE SAME OR EQUIVALENT TILE.
6. SYSTEM TYPE: FIRE ALARM SYSTEM SHALL MEET THE REQUIREMENTS FOR PROTECTED PREMISE FIRE ALARM SYSTEMS. SYSTEM SHALL PROVIDE OFF-PREMISE NOTIFICATION OF STATUS TO CENTRAL STATION DETERMINED BY OWNER.
7. OCCUPANT NOTIFICATION: RECEIPT OF ANY FIRE ALARM SIGNAL AT THE FACP SHALL RESULT IN THE ACTIVATION OF ALL NOTIFICATION APPLIANCES IN THE BUILDING (STROBES AND HORN/STROBES). FOR PURPOSES OF FIRE ALARM NOTIFICATION, THE BUILDING SHALL BE CONSIDERED AS A SINGLE ZONE.
8. WIRING/CONDUIT: ALL WIRING SHALL BE NEW (EXISTING WIRING MAY NOT BE RE-USED) AND SHALL BE FREE OF OPENS, SHORTS AND GROUND. ALL WIRING SHALL BE INSTALLED IN RIGID CONDUIT OR EMT. FLEXIBLE CONDUIT MAY BE USED FOR DROPS TO SINGLE DEVICES (MAXIMUM 6'). MINIMUM CONDUIT SIZE SHALL BE 1/2" CONDUIT SHALL BE CONCEALED IN FINISHED AREAS AND MAY BE EXPOSED IN UNFINISHED AREAS. PAINT EXPOSED CONDUIT TO MATCH COLOR OF SURROUNDING BUILDING ELEMENTS. ALL PENETRATIONS THROUGH RATED PARTITIONS SHALL BE FIRE STOPPED WITH A SUITABLE CAULKING COMPOUND. ALL WIRING USED IN THE FIRE ALARM SYSTEM SHALL BE TYPE F (FIRE POWER LIMITED) WITH MINIMUM 300V INSULATION OR EQUIVALENT AS PER NFPA 70 ARTICLE 760.

9. WIRING STYLES/PER NFPA 72: INITIATING DEVICE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE D CIRCUITS. SIGNALING LINE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE 6 OR 7 CIRCUITS. NOTIFICATION APPLIANCE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE Z.
10. POWER: EXISTING DEDICATED BRANCH CIRCUITS MAY BE REUSED TO PROVIDE PRIMARY POWER TO NEW FACP AND REMOTE NOTIFICATION CIRCUIT POWER SUPPLIES. FURNISH A BATTERY BACKUP TO PROVIDE SECONDARY POWER SUPPLY TO FIRE ALARM PANEL AND NOTIFICATION CIRCUIT POWER SUPPLIES. BATTERY BACKUP SHALL BE OF SUFFICIENT CAPACITY TO PROVIDE 24 HOURS OF STANDBY POWER WITH AN ADDITIONAL RESERVE TO OPERATE SYSTEM FOR 5 MINUTES IN ALARM.
11. INITIATING DEVICES: SLC CIRCUITS: SLC LOOP DEVICE ADDRESSING SHALL NOT EXCEED 159 DETECTORS (SMOKES, HEATS, DUCT SMOKE, ETC.) OR 159 MODULES (PULL STATIONS, MONITOR, CONTROL, ETC.) PER LOOP. AT LEAST 30 ADDRESSES (20%) SHOULD BE LEFT VACANT ON EACH SLC LOOP IN ORDER TO ALLOW SPACE FOR ADJUSTMENTS/EXPANSION. SMOKE DETECTORS: PROVIDE SMOKE DETECTORS WHERE SHOWN ON PLANS IN ALL CORRIDORS AND LOBBIES. MAXIMUM SPACING OF DETECTORS SHALL BE 30' BETWEEN DETECTORS OR 15' FROM FURTHEST WALL. MANUAL PULL STATIONS: INSTALL NEW PULL STATIONS AT SAME LOCATION AND HEIGHT AS EXISTING PULL STATIONS USING EXISTING JUNCTION BOXES. WHERE NEW MANUAL PULL STATIONS ARE INDICATED ON THE PLAN, INSTALL WITH OPERATING ELEMENT AT 48" AFF. HEAT DETECTORS: PROVIDE HEAT DETECTORS WHERE SHOWN ON PLANS IN ALL AREAS NOT PROTECTED WITH SMOKE DETECTORS. MAXIMUM SPACING FOR HEAT DETECTORS SHALL BE 50' BETWEEN DETECTORS OR 25' FROM FURTHEST WALL.

- ADDRESSABLE MODULES: PROVIDE ADDRESSABLE MODULES TO MONITOR EXISTING CONVENTIONAL DEVICES (PROJECTED BEAM SMOKE DETECTOR) TO REMAIN AND TROUBLE OUTPUT OF NEW NOTIFICATION CIRCUIT POWER SUPPLIES. LOCATE MONITOR MODULE ADJACENT TO DEVICE MONITORED IN AN ACCESSIBLE LOCATION OR ABOVE REMOVABLE CEILING TILE. LABEL AS PART OF THE FIRE ALARM SYSTEM WITH THE NAME OF THE DEVICE MONITORED ON THE COVER OF THE JUNCTION BOX.
12. NOTIFICATION APPLIANCES: PROVIDE AUDIBLE AND VISUAL NOTIFICATION APPLIANCES THROUGHOUT BUILDING. WALL MOUNTED DEVICES MAY BE INSTALLED ON EXISTING J-BOXES. VOLUME OF HORNS SHALL BE SUFFICIENT TO PROVIDE A SOUND LEVEL OF 15 DB ABOVE AMBIENT IN ALL OCCUPIED AREAS. VISIBLE ALARMS SHALL BE PROVIDED THROUGHOUT ALL OCCUPIED AREAS OF THE BUILDING INCLUDING PRIVATE OFFICES AND AREAS WITH POSSIBLE OCCUPANCY BY HEARING IMPAIRED PERSONS. STROBES SHALL FLASH IN SYNCHRONIZATION.
13. FIRE SAFETY FUNCTIONS: CONTROL MODULES WITH RELAY CONTACTS SHALL BE INSTALLED AND PROGRAMMED TO PROVIDE DOOR RELEASE, FAN SHUTDOWN, SECURE DOOR RELEASE & ACTIVATION OF NOTIFICATION CIRCUIT POWER SUPPLIES (UNLESS PROVIDED BY SEPARATE CIRCUIT FROM FACP). THE CONTROL RELAY MODULES SHALL BE INSTALLED WITHIN 36" OF DEVICE OR CIRCUIT CONTROLLED.
14. PHASING: PLAN SEQUENCE OF WORK TO MINIMIZE DOWN TIME OF FIRE ALARM SYSTEM. IT IS THE INSTALLER'S RESPONSIBILITY TO NOTIFY PROPER AUTHORITIES AND PROVIDE A FIRE WATCH DURING INTERRUPTIONS OF FIRE DETECTION AND ALARM SERVICE IN THE BUILDING.

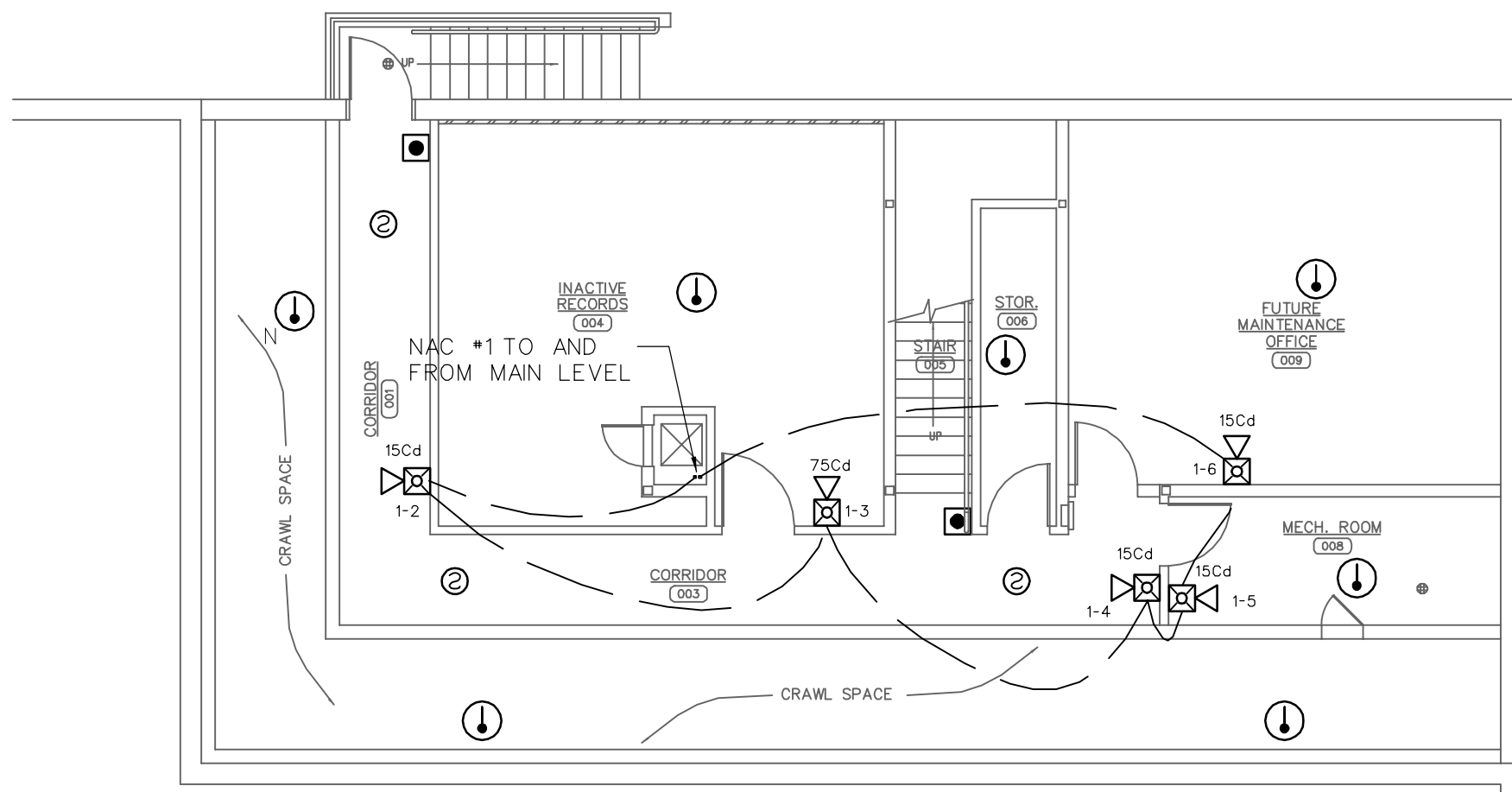
15. TESTING: SCHEDULE AND PERFORM ALL ACCEPTANCE TESTS REQUIRED BY NFPA 72. TESTING SHALL BE WITNESSED BY STATE FIRE MARSHAL'S OFFICE, PROJECT ENGINEER, DFCM AND BUILDING MAINTENANCE PERSONNEL. SUBMIT A WRITTEN TESTING PLAN DETAILING EACH TEST TO BE PERFORMED TO EACH AGENCY AT LEAST ONE DAY PRIOR TO SCHEDULED TEST.

FIRE ALARM SYSTEM KEY NOTES

- ① REMOVE EXISTING CONVENTIONAL FIRE ALARM CONTROL PANEL (FACP), MODULES AND ENCLOSURE. FURNISH AND INSTALL NEW ADDRESSABLE FACP AT LOCATION OF EXISTING PANEL. INSTALL FACP RECESSED INTO WALL, PATCH AND PAINT WALL TO MATCH SURROUNDING SURFACE. FACP SHALL HAVE ALPHANUMERIC ANNUNCIATOR AND DIGITAL COMMUNICATOR. FACP SHALL BE SILENT KNIGHT MODEL 5820X OR FIRE-LITE MODEL 45-8600 WITH DACT-UD. FACP SHALL PROVIDE ALL REQUIRED PROTECTED PREMISES FIRE SAFETY FUNCTIONS (FIRE DOOR RELEASE, FAN SHUTDOWN AND RELEASE ACCESS CONTROL) IN SECURE EGRESS DOORS. FACP SHALL RELAY FIRE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO OFF-PREMISE CENTRAL STATION USING DIGITAL COMMUNICATOR AND NEW PHONE LINES (PRIMARY & SECONDARY).
- ② EXISTING DIGITAL ALARM COMMUNICATOR/TRANSMITTER (DACT) PROVIDES OFF-PREMISE MONITORING FOR EXISTING FIRE ALARM AND SECURITY SYSTEMS. MODIFY DACT TO COMMUNICATE SECURITY SIGNALS ONLY. OFF-PREMISE FIRE ALARM SIGNALS TO BE TRANSMITTED BY NEW FIRE ALARM CONTROL PANEL. EXTEND NEW PHONE LINES FROM NEAREST TELEPHONE BOARD TO FACP AS REQUIRED.
- ③ EXISTING ANNUNCIATOR PANEL FOR CONVENTIONAL FIRE ALARM SYSTEM TO BE REMOVED. FURNISH AND INSTALL NEW REMOTE ANNUNCIATOR FOR ADDRESSABLE FIRE ALARM SYSTEM AT SAME LOCATION. PROTECT DECORATIVE COVER PLATE (VACANT BY OWNER) OR PATCH WALL AT VOID SPACE CREATED BY REMOVAL OF LARGER, EXISTING ANNUNCIATOR.
- ④ FURNISH AND INSTALL NEW REMOTE POWER SUPPLIES TO PROVIDE 24 VDC POWER TO NEW NOTIFICATION APPLIANCE CIRCUITS, MAGNETIC DOOR HOLD-OPEN DEVICES AND PROJECTED BEAM SMOKE DETECTORS. POWER SUPPLIES SHALL BE INSTALLED IN SAME LOCATION AS EXISTING POWER SUPPLY TO BE REMOVED. INSTALL POWER SUPPLIES RECESSED INTO WALL, PATCH AND PAINT WALL TO MATCH SURROUNDING SURFACE. PROVIDE ADDRESSABLE MONITOR MODULE TO SUPERVISE TROUBLE OUTPUT OF REMOTE POWER SUPPLY AND PROVIDE BACKUP BATTERIES SIZED TO MEET STANDBY DEMAND OF POWER SUPPLY FOR 24 HOURS WITH AN ADDITIONAL RESERVE FOR 5 MINUTES OF ALARM POWER. NUMBER AND CAPACITY OF POWER SUPPLIES AND LAYOUT OF NOTIFICATION APPLIANCE CIRCUITS SHALL LIMIT VOLTAGE DROP BETWEEN POWER SUPPLY AND MOST REMOTE DEVICE ON CIRCUIT TO LESS THAN 20%. PROVIDE MODULES AS REQUIRED TO SYNCHRONIZE STROBE FLASHES OF ALL NOTIFICATION APPLIANCES WITHIN A SINGLE FIELD OF VIEW. NOTIFICATION CIRCUITS TO BE ACTIVATED BY NEW ADDRESSABLE RELAYS CONTROLLED BY FACP.
- ⑤ FURNISH AND INSTALL A PROGRAMMABLE RELAY TO SHUT DOWN EACH AIR HANDLER WITH A CAPACITY IN EXCESS OF 2,000 CFM. CONTROL RELAYS SHALL BE NORMALLY ENERGIZED AND FAN CONTROLS SHALL BE CONNECTED TO NORMALLY CLOSED CONTACTS ON THE RELAYS. RELAYS SHALL BE PROGRAMMED TO SHUT DOWN ALL AIR HANDLERS SIMULTANEOUSLY UPON ACTIVATION OF ANY AREA OR DUCT SMOKE DETECTOR AND SHALL NOT RESTORE UNTIL THE FACP HAS RESET.
- ⑥ EXISTING PROJECTED BEAM SMOKE DETECTOR TO REMAIN. PROVIDE 24 VDC, RESETTABLE, SUPERVISED, CONTINUOUS POWER TO EXISTING DETECTOR FROM FACP OR REMOTE POWER SUPPLY. FURNISH AND INSTALL MONITOR MODULES TO DETECTOR TO FACILITATE MONITORING OF EACH DETECTOR AS AN ADDRESSABLE POINT. PROVIDE ONE MODULE TO MONITOR ALARM CONTACTS AND A SECOND MODULE TO MONITOR TROUBLE CONTACTS.
- ⑦ FURNISH AND INSTALL A PERMANENT SIGN MOUNTED ON EACH COURTROOM DOOR STATING: MAXIMUM OCCUPANCY - 48. SIGN SHALL BE NO SMALLER THAN 10" WIDE BY 8" TALL. BLOCK LETTERING AT LEAST 1/2" TALL. SHALL BE USED. COLOR AND STYLE OF SIGN TO BE APPROVED BY OWNER.
- ⑧ PROVIDE PROGRAMMABLE RELAY TO RELEASE EXISTING MAGNETIC DOOR HOLD-OPEN DEVICE ON FIRE DOORS UPON RECEIPT OF ANY FIRE ALARM SIGNAL AT THE FACP. POWER TO MAGNET TO BE PROVIDED BY CIRCUIT FROM FACP OR REMOTE POWER SUPPLY SUPERVISED BY THE FACP.
- ⑨ PROVIDE AN ADDRESSABLE RELAY MODULE AT EACH ACCESS-CONTROLLED EGRESS DOOR. CONNECT POWER TO SECURITY DOOR MAGNET THROUGH NORMALLY CLOSED CONTACT ON ADDRESSABLE RELAY. PROGRAM RELAY TO OPEN (RELEASING DOOR MAGNETS) UPON RECEIPT OF ANY FIRE ALARM SIGNAL AT THE FACP. RELAY SHALL NOT RESET UNTIL THE FIRE ALARM CONDITION HAS BEEN CLEARED AND THE FACP RESET TO NORMAL CONDITION.
- ⑩ PROVIDE TAMPER-PROOF ENCLOSURE TO PROTECT EACH DETECTOR INSTALLED IN DETENTION CELLS. EXISTING ENCLOSURE MAY BE RE-USED IF COMPATIBLE WITH NEW DETECTOR.

FIRE ALARM EQUIPMENT LEGEND

DEVICE	DESCRIPTION	MOUNTING	REMARKS
FACP	NEW ADDRESSABLE FIRE ALARM CONTROL PANEL TO REPLACE EXISTING CONVENTIONAL PANEL	MOUNT RECESSED INTO WALL AT LOCATION OF EXISTING FACP TO BE REMOVED.	SILENT KNIGHT MODEL 5820X OR FIRE-LITE MODEL 45-8600 WITH DACT-UD.
ANN	NEW FIRE ALARM REMOTE ANNUNCIATOR PANEL TO REPLACE EXISTING ANNUNCIATOR	MOUNT ON NEW OR EXISTING J-BOX RECESSED INTO WALL	ANNUNCIATOR SHALL HAVE A BUILT-IN LED (MINIMUM OF 80 CHARACTERS) TO DISPLAY STATUS OF FIRE ALARM SYSTEM AS WELL AS NAME AND ADDRESS OF ANY DEVICE INDICATING AN ALARM OR TROUBLE CONDITION. ANNUNCIATOR SHALL HAVE KEYS TO ALLOW ALARM SILENCE AND SYSTEM RESET.
NAC-PS	NEW REMOTE NOTIFICATION CIRCUIT POWER SUPPLIES TO REPLACE EXISTING POWER SUPPLY	MOUNT RECESSED INTO WALL AT LOCATION OF EXISTING POWER SUPPLY TO BE REPLACES.	TO POWER NOTIFICATION APPLIANCES. MAGNETIC DOOR HOLD-OPEN DEVICES AND PROJECTED BEAM SMOKE DETECTORS.
DACT	EXISTING DIGITAL ALARM COMMUNICATOR/TRANSMITTER	EXISTING	EXISTING DACT TO BE RECONFIGURED. FUNCTION OF DACT TO BE BUILT-INTO NEW ADDRESSABLE FACP. EXTEND EXISTING PRIMARY AND SECONDARY TELEPHONE LINES FROM DACT TO FACP.
DO	EXISTING MAGNETIC DOOR HOLD-OPEN DEVICE	EXISTING	CONNECT EXISTING DEVICE TO 24-VDC POWER FROM NEW FACP OR NEW REMOTE POWER SUPPLY. RELAY RELEASE SHALL BE CONTROLLED BY ADDRESSABLE RELAY.
SD	NEW ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR TO REPLACE EXISTING DETECTOR	CEILING MOUNTED ON EXISTING J-BOX	REMOVE EXISTING CONVENTIONAL SMOKE DETECTOR AND REPLACE WITH NEW ADDRESSABLE SMOKE DETECTOR. SMOKE DETECTORS ARE REQUIRED IN ALL CORRIDORS AND LOBBIES AT A MAXIMUM SPACING OF 30' O.C.
SDN	NEW ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR	CEILING MOUNTED ON NEW RECESSED J-BOX	ADD NEW SMOKE DETECTOR WHERE INDICATED ON PLAN.
HT	NEW ADDRESSABLE HEAT DETECTOR (FIXED TEMPERATURE) TO REPLACE EXISTING DETECTOR	CEILING MOUNT ON EXISTING J-BOX	REMOVE EXISTING CONVENTIONAL DETECTOR AND REPLACE WITH NEW ADDRESSABLE HEAT DETECTOR. MAXIMUM SPACING OF DETECTORS SHALL CONFORM TO NFPA 72 AND MANUFACTURER'S REQUIREMENTS.
HTN	NEW ADDRESSABLE HEAT DETECTOR (FIXED TEMPERATURE)	CEILING MOUNT ON NEW RECESSED J-BOX	ADD NEW HEAT DETECTOR WHERE INDICATED ON PLAN.
BD	EXISTING PROJECTED BEAM SMOKE DETECTOR	EXISTING	EXISTING DETECTOR TO REMAIN. PROVIDE SUPERVISED 24 VDC POWER TO EXISTING DETECTOR FROM NEW FACP. PROVIDE ADDRESSABLE MONITOR MODULES TO FACILITATE MONITORING OF DETECTOR AS AN ADDRESSABLE POINT.
MS	NEW ADDRESSABLE MANUAL PULL STATION TO REPLACE EXISTING PULL STATION	MOUNT ON EXISTING J-BOX.	REPLACE EXISTING PULL STATIONS WITH NEW ADDRESSABLE PULL STATIONS. COMPATIBLE WITH NEW FACP.
MSN	NEW ADDRESSABLE MANUAL PULL STATION	WALL MOUNT ON NEW RECESSED J-BOX AT 48" AFF.	ADD NEW PULL STATION WHERE INDICATED ON PLAN.
DS	NEW ADDRESSABLE DUCT SMOKE DETECTOR	DUCT MOUNTED IN SUPPLY AND RETURN DUCTS PER MANUFACTURER'S REQUIREMENTS.	INSTALL DUCT SMOKE DETECTORS IN SUPPLY AND RETURN DUCTS OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2000 CFM PER NFPA 72, NFPA 90 AND THE IMC.
MM	NEW ADDRESSABLE MONITOR MODULE	MOUNT ON NEW J-BOX NEAR CONVENTIONAL DEVICE TO BE MONITORED.	CONNECT TO CONTACTS OF CONVENTIONAL DEVICE TO FACILITATE MONITORING OF DEVICE AS AN ADDRESSABLE POINT.
REL	NEW ADDRESSABLE RELAY MODULE	MOUNT ON J-BOX WITHIN 3' OF DEVICE OR CIRCUIT CONTROLLED.	TO PROVIDE PROTECTED PREMISE FIRE FIRE SAFETY FUNCTIONS SUCH AS DOOR RELEASE, FAN SHUTDOWN AND SECURE DOOR RELEASE.
H/S	NEW FIRE ALARM HORN/STROBE TO REPLACE EXISTING HORN/STROBE	WALL MOUNT ON EXISTING JUNCTION BOX	CANDELA RATING OF STROBE SHALL BE AS INDICATED ON DRAWING. STROBES SHALL BE SYNCHRONIZED WITH ALL OTHER STROBES IN VIEW. DEVICE SHALL BE POWERED FROM FACP OR REMOTE NOTIFICATION APPLIANCE CIRCUIT POWER SUPPLY.
H/SN	NEW FIRE ALARM HORN/STROBE	WALL MOUNT AT 80" AFF ON NEW, RECESSED J-BOX.	
H/SN	NEW FIRE ALARM STROBE TO REPLACE EXISTING NOTIFICATION APPLIANCE	CEILING OR WALL MOUNT AT 80" TO 96" AFF	
H/SN	NEW FIRE ALARM HORN/STROBE	CEILING MOUNTED ON RECESSED J-BOX	
NA	EXISTING NOTIFICATION APPLIANCE TO BE REMOVED	EXISTING TO BE REMOVED.	REMOVE EXISTING DEVICE AND WIRING AND PROVIDE COVER PLATE (APPROVED BY OWNER) FOR EXISTING J-BOX.



WIRING STYLES(PER NFPA 72): INITIATING DEVICE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE D CIRCUITS, SIGNALING LINE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE 6 OR 7 CIRCUITS, NOTIFICATION APPLIANCE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE Z.

5. DEMOLITION IT IS THE INSTALLER'S RESPONSIBILITY FOR THE DEMOLITION OF THE EXISTING FIRE ALARM SYSTEM. ALL NEW DEVICES AND CIRCUITS WILL REPLACE THE OLD AND GENERALLY REUSE THE SAME CABLES AND CONDUITS. EXISTING DEVICES THAT ARE NOT BEING REPLACED AND REUSED THAT ARE VISIBLE, SUCH AS CABINET NOTIFICATION APPLIANCES OR SMOKE DETECTORS SHALL BE REPAIRED OR REPLACED TO MATCH SURROUNDING AREAS. REMOVE ALL UNUSED WIRE IN ALL REMAINING J-BOXES AND/OR CONDUITS. ANY CEILING TILE DAMAGED BY THE INSTALLER MUST BE REPLACED WITH THE SAME OR EQUIVALENT TILE.
6. SYSTEM TYPE: FIRE ALARM SYSTEM SHALL MEET THE REQUIREMENTS FOR PROTECTED PREMISE FIRE ALARM SYSTEMS. SYSTEM SHALL PROVIDE OFF-PREMISE NOTIFICATION OF STATUS TO CENTRAL STATION DETERMINED BY OWNER.
7. OCCUPANCY: THE PROPOSED OCCUPANCY OF THE FIRE ALARM SIGNAL AT THE FACP SHALL RESULT IN THE ACTIVATION OF ALL NOTIFICATION APPLIANCES IN THE BUILDING (STROBES AND SIRENS). THE BUILDING SHALL BE CONSIDERED A SINGLE ZONE. THE BUILDING SHALL BE CONSIDERED AS A SINGLE ZONE.
8. WIRING/CONDUIT: ALL WIRING SHALL BE NEW. EXISTING WIRING MAY BE REUSED WHERE APPROPRIATE. ALL WIRING SHALL BE INSTALLED IN RIGID CONDUIT OR EMT. FLEXIBLE CONDUIT MAY BE USED FOR DRIPS TO SINGLE DEVICES (MAXIMUM 6"). MINIMUM CONDUIT SIZE SHALL BE 1/2" CONDUIT SHALL BE USED IN FINISHED AREAS AND MAY BE EXP. CONDUIT IN UNFINISHED AREAS. PIPING CONDUIT SHALL BE USED TO MATCH COLOR OF SURROUNDING BUILDING ELEMENTS. ALL WIRING THROUGH ROOF SHALL BE FIRE STOPPED WITH A SUIABLE CABLEFILING COMPOUND. ALL WIRING USED IN THE FIRE ALARM SYSTEM SHALL BE FPLI (FIRE, POWER AND SIGNAL) RATED. MINIMUM INSULATION OR EQUIVALENT AS PER NFPA 70 ARTICLE 760.

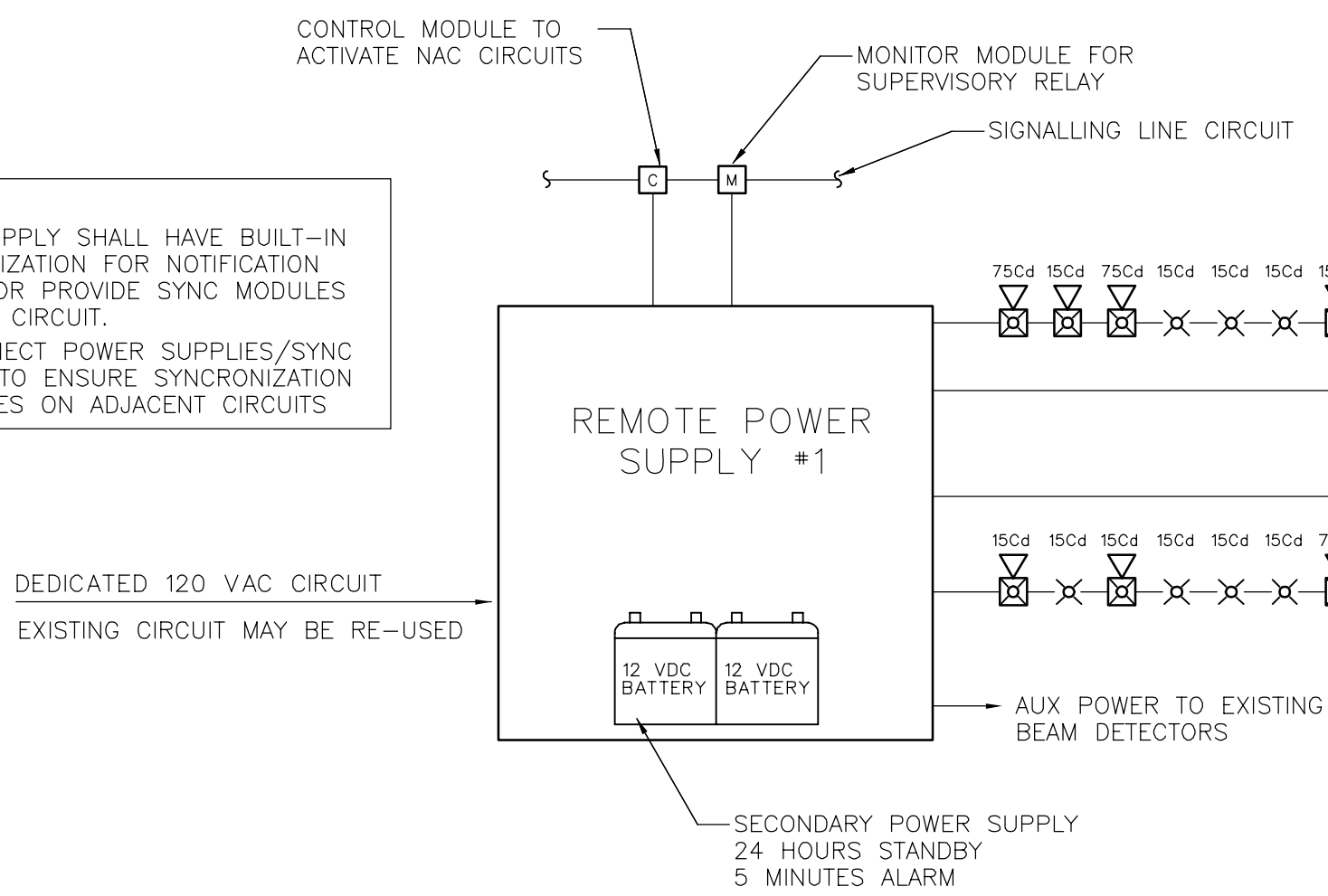
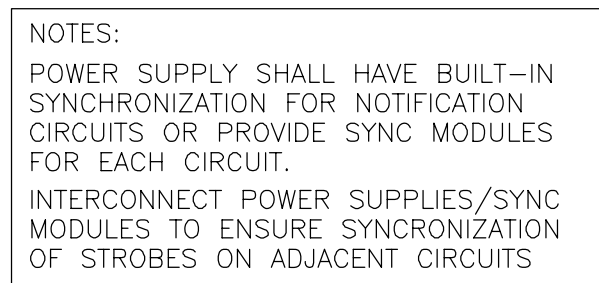
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10. POWER: EXISTING DEDICATED BRANCH CIRCUITS MAY BE REUSED TO PROVIDE PRIMARY POWER TO NEW FACP AND REMOTE NOTIFICATION CIRCUIT POWER SUPPLIES. FURNISH A BATTERY BACKUP SYSTEM TO PROVIDE TO MINIMUM 90 MINUTES OF ALARM PULSATION AND NOTIFICATION CIRCUIT POWER SUPPLIES. BATTERY BACKUP SHALL BE OF SUFFICIENT CAPACITY TO PROVIDE 24 HOURS OF MINIMUM POWER AND A MINIMUM RESERVE TO OPERATE SYSTEM FOR 5 MINUTES IN ALARM.
11. INITIATING DEVICES: SLC LOOP DEVICE ADDRESSING SHALL NOT EXCEED 159 DETECTORS (SMOKES, HEATS, DUCT SMOKES, ETC.) OR 159 MODULES (PULP STATIONS, MONITOR, CONTROL, ETC.) PER LOOP. LOCATIONS SHALL BE INDICATED ON THE PLAN. LOCATIONS ON EACH SLC LOOP IN ORDER TO ALLOW SPACE FOR ADJUSTMENTS/EXPANSION: SMOKE DETECTORS: PROVIDE SMOKE DETECTORS WHERE SHOWN ON PLANS. ALL SLC DETECTORS SHALL HAVE A MAXIMUM SPACING OF DETECTORS SHALL BE 30' BETWEEN DETECTORS OR 15' FROM FURTHEST WALL.
12. PULP STATIONS: INSTALL NEW PULP STATIONS AT SAME LOCATION AND HEIGHT AS EXISTING PULP STATIONS USING EXISTING JUNCTION BOXES. WHERE NEW MANUAL PULP STATIONS ARE INDICATED ON THE PLAN INSTALL WITH OPERATING ELEMENT AT 48" AFF.
- HEAT DETECTORS: PROVIDE HEAT DETECTORS WHERE SHOWN ON PLANS IN ALL AREAS NOT PROTECTED WITH SMOKE DETECTORS. MAXIMUM SPACING OF HEAT DETECTORS SHALL BE 50' BETWEEN DETECTORS OR 25' FROM FURTHEST WALL.

PHASING: PLAN SEQUENCE OF WORK TO MINIMIZE DOWN TIME OF FIRE ALARM SYSTEM. IT IS THE INSTALLER'S RESPONSIBILITY TO NOTIFY PROPER AUTHORITIES AND PROVIDE A FIRE WATCH DURING INTERRUPTIONS OF FIRE DETECTION AND ALARM SERVICE IN THE BUILDING.

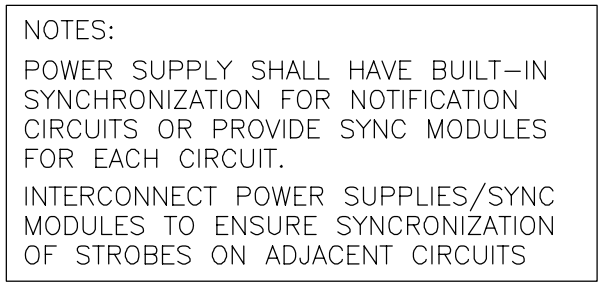
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13. FIRE SAFETY FUNCTIONS: CONTROL MODULES WITH RELAY CONTACTS SHALL BE INSTALLED AND PROGRAMMED TO PROVIDE DOOR RELEASE, FAN SHUTDOWN, SECURE DOOR RELEASE & ACTIVATION OF NOTIFICATION CIRCUIT. POWER SUPPLIES (UNLESS PROVIDED BY SEPARATE CIRCUIT FROM FACP). THE CONTROL RELAY MODULES SHALL BE INSTALLED WITHIN 36" OF DEVICE OR CIRCUIT CONTROLLED.

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SYSTEM INPUTS

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















01 REMOVE EXISTING CONVENTIONAL FIRE ALARM CONTROL PANEL (FACP), MODULES AND ENCLOSURE, FURNISH AND INSTALL NEW ADDRESSABLE FACP AT LOCATION OF EXISTING PANEL. INSTALL FACP W/ WIRING INTO EXISTING CONDUIT AND WIRING W/ TO EXISTING SURROUNDING SURFACE. FACP SHALL HAVE ALPHANUMERIC ANNUNCIATOR AND DIGITAL COMMUNICATOR. FACP SHALL BE SILENT KNIGHT MODEL 5820XL OR FIRE-LITE MODEL MS-9600 WITH 12VDC BATTERY. FACP SHALL HAVE 24VDC BATTERY. PREMISES FIRE SAFETY FUNCTIONS (FIRE DOOR RELEASE, FAN SHUTDOWN, AND RELEASE ACCESS CONTROLLED SECURE EGRESS DOORS). FACP SHALL HAVE FIRE ALARM SUPERVISORY AND TROUBLE SIGNALS TO OFF-PREMISE CENTRAL STATION USING DIGITAL COMMUNICATOR AND NEW PHONE LINES (PRIMARY & SECONDARY).

02 EXISTING DIGITAL ALARM COMMUNICATOR/TRANSMITTER (DACT) PROVIDES OFF-PREMISE MONITORING FOR EXISTING FIRE ALARM AND SECURITY SYSTEMS. MODIFY DACT TO COMMUNICATE SECURITY SIGNALS ONLY. OFF-PREMISE MONITORING SIGNALS TO BE TRANSMITTED BY NEW FIRE ALARM CONTROL PANEL. EXTEND NEW PHONE LINES FROM NEAREST TELEPHONE BOARD TO FACP AS REQUIRED.

03 EXISTING ANNUNCIATOR PANEL FOR CONVENTIONAL FIRE ALARM SYSTEM TO BE REMOVED. FURNISH AND INSTALL NEW REMOTE MONITORING CONTROLLER FOR EXISTING FIRE ALARM SYSTEM AT LOCATION. PROVIDE DECORATIVE COVER PLATES (APPROVED BY OWNER) OR PATCH WALL AT VOID SPACE CREATED BY REMOVAL OF LARGER, EXISTING ANNUNCIATOR.

04 FURNISH AND INSTALL NEW REMOTE POWER SUPPLIES TO PROVIDE 2 VDC POWER TO NEW NOTIFICATION APPLIANCE CIRCUITS, MAGNETIC LATCH HOLD-OPEN DOOR CLOSURES AND SMOKE AND HEAT DETECTORS. POWER SUPPLIES SHALL BE INSTALLED IN SAME LOCATION AS EXISTING POWER SUPPLY TO BE REMOVED. INSTALL NEW POWER SUPPLIES TO MATCH EXISTING POWER SUPPLY TO MATCH SURROUNDING SURFACE. PROVIDE ADDRESSABLE MONITOR MODULE TO SUPERVISE TROUBLE OUTPUT OF REMOTE POWER SUPPLY AND PROVIDE BACKUP BATTERIES SIZED TO MEET STAND-BY DEMAND AND 5 MINUTES OF ALARM POWER. NUMBER AND CAPACITY OF POWER SUPPLIES AND LAYOUT OF NOTIFICATION APPLIANCE CIRCUITS SHALL MATCH EXISTING LAYOUT. PROVIDE ADDITIONAL RESERVE FIRE ALARM DEVICE ON CIRCUIT TO LESS THAN 20%. PROVIDE MODULES AS REQUIRED TO SYNCHRONIZE STROBE FLASHES OF ALL NOTIFICATION DEVICES WITHIN 5 SECONDS FIELD OF VIEW. NOTIFICATION CIRCUITS TO BE ACTIVATED BY NEW ADDRESSABLE RELAYS CONTROLLED BY FACP.

DEVICE	DESCRIPTION	MOUNTING	REMARKS
FACT-2	NEW ADDRESSABLE FIRE ALARM CONTROL PANEL TO REPLACE EXISTING CONVENTIONAL PANEL.	MOUNT RECESSED INTO WALL AT LOCATION OF EXISTING FACT-2 TO BE REMOVED.	SILENT HANGMOUNT MODEL 8200H OR FIRE-LITE MODEL WS-9600 WITH ONE-LINE.
ANN	NEW FIRE ALARM RESET ANNUNCIATOR PANEL TO REPLACE EXISTING ANNUNCIATOR.	MOUNT ON NEW OR EXISTING J-BOX RECESSED INTO WALL.	ANNUNCIATOR SHALL HAVE A BUILT-IN 10-15 MINIMUM OF 30 CHARACTERIZED TO DISPLAY STATUS OF FIRE ALARM SYSTEM. IT SHALL HAVE NAME AND ADDRESS OF ANY DEVICE INCLUDING AN ALARM, OR PROBABLE CONDITION. ANNUNCIATOR SHALL HAVE NOVELTIES KEYS TO ALLOW MANUAL RELEASE AND SYSTEM RESET.
FACT-PS	NEW REMOTE NOTIFICATION CIRCUIT SUPPLIES TO REPLACE EXISTING POWER SUPPLY.	MOUNT RECESSED INTO WALL AT LOCATION OF EXISTING FACT-PS SUPPLY TO BE REPLACED.	TO POWER NOTIFICATION APPLIANCES. CIRCUIT SHALL BE PROTECTED BY FUSES AND PROTECTED BEAM SMOKE.

SYMBOL	COMMUNICATOR/ TRANSMITTER	REQUIREMENTS
	EXISTING MAGNETIC DOOR HOLD-OPEN DEVICE	EXISTING CONNECT EXISTING DEVICE TO 24-VOLTS POWER FROM NEW FACP ON NEW REMOTE POWER SUPPLIES. POWER TO DEVICE SHALL BE CONTROLLED BY ADDRESSABLE SMOKE DETECTOR.
	NEW ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR TO REPLACE EXISTING DETECTOR.	CEILING MOUNTED ON EXISTING J-BOX. REMOVE EXISTING CONVENTIONAL SMOKE DETECTORS AND REPLACE WITH NEW ADDRESSABLE SMOKE DETECTORS. SMOKE DETECTORS ARE REQUIRED IN ALL CORRIDORS AND LOBBIES AT A MAXIMUM SPACING OF 30' O.C.
	NEW ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR	CEILING MOUNTED ON NEW RECESSED J-BOX. ADD NEW SMOKE DETECTOR WHERE INDICATED ON PLAN.
	NEW ADDRESSABLE HEAT DETECTOR (FUEL TEMPERATURE) TO REPLACE EXISTING DETECTOR.	CEILING MOUNT ON EXISTING J-BOX. REMOVE EXISTING CONVENTIONAL HEAT DETECTOR AND REPLACE WITH NEW ADDRESSABLE HEAT DETECTOR. MAXIMUM SPACING OF DETECTORS SHALL CONFORM TO NFPA 72 AND MANUFACTURER'S REQUIREMENTS.
	NEW ADDRESSABLE HEAT DETECTOR (FUEL TEMPERATURE)	CEILING MOUNT ON NEW RECESSED J-BOX. ADD NEW HEAT DETECTOR WHERE INDICATED ON PLAN.
	EXISTING PROJECTED BEAM SMOKE DETECTOR	EXISTING. EXISTING DETECTOR TO REMAIN, PROVIDED SUPPLEMENTED 24-VDC POWER TO EXISTING DETECTOR FROM NEW FACP. ADDRESSABLE MONITOR MODULES TO FACILITATE MONITORING OF DETECTOR AS AN ADDRESSABLE POINT.
	NEW ADDRESSABLE MANUAL PULL STATION TO REPLACE EXISTING PULL STATION.	MOUNT ON EXISTING J-BOX. REPLACE EXISTING PULL STATION WITH NEW ADDRESSABLE PULL STATION COMPATIBLE WITH NEW FACP.
	NEW ADDRESSABLE MANUAL PULL STATION	WALL MOUNT ON NEW RECESSED J-BOX AT 48" AFF. ADD NEW PULL STATION WHERE INDICATED ON PLAN.
	NEW ADDRESSABLE DUCT SMOKE DETECTOR	DUCT MOUNTED IN SUPPLY AND RETURN DUCTS PER MANUFACTURER'S REQUIREMENTS. INSTALL DUCT SMOKE DETECTORS IN SUPPLY AND RETURN DUCTS PER AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2000 CFM PER NFPA 72, NFPA 90A AND THE IMC.
	NEW ADDRESSABLE MONITOR MODULE	MOUNT ON NEW J-BOX NEAR CONVENTIONAL DEVICE TO BE MONITORED. CONNECT TO CONTACTS OF CONVENTIONAL DEVICE TO FACILITATE MONITORING OF DEVICE AS AN ADDRESSABLE POINT.
	NEW ADDRESSABLE RELAY MODULE	MOUNT ON J-BOX WITHIN 3' OF DEVICE OR CIRCUIT CONTROLS. TO PROVIDE PROTECTED PREMISE FIRE ALARM SILENCE MONITORING OF DOOR RELEASE, FLAM SHUTDOWN AND SECURE DOOR RELEASE.
	NEW FIRE ALARM HORN/SIROBE TO REPLACE EXISTING HORN/SIROBE	WALL MOUNT ON EXISTING JUNCTION BOX. CANDIDA NOTING OF SIROBE SHALL AS BE INDICATED ON DRAWINGS. SIROBE SHALL BE POWERED FROM FACP OR REMOTE NOTIFICATION APPLIANCE CIRCUIT POWER SUPPLY.
	NEW FIRE ALARM HORN/SIROBE	WALL MOUNT AT 80" AFF ON NEW, RECESSED J-BOX.
	NEW FIRE ALARM SIROBE TO REPLACE EXISTING NOTIFICATION APPLIANCE	CEILING OR WALL MOUNT AT 80" TO 96" AFF.
	NEW FIRE ALARM HORN/SIROBE	CEILING MOUNTED ON RECESSED J-BOX.
	EXISTING NOTIFICATION APPLIANCE TO BE REMOVED	EXISTING TO BE REMOVED. REMOVE EXISTING SMOKE AND HORNING AND PROVIDE COVER PLATE (APPROVED BY OWNER) FOR EXISTING J-BOX.

TAH

DFCM PROJECT #06109150

DETAILS

FA-2